

CLAIMS

We claim as our invention:

1. A method for the rapid and accurate reproduction of single and multi-cavity molding tools and mold cavities, comprising the steps of:
 - a. providing standard mold bases
 - b. milling standardized pockets in said mold bases
 - c. fabricating identical, interchangeable ceramic mold inserts having a standardized mounting surface and standardized external dimensions matching said standardized mold base pockets
 - d. securing said identical, interchangeable ceramic mold inserts to said standardized mold base pockets
2. The method of Claim 1 whereby said standardized interchangeable ceramic mold inserts are secured to said standardized mold base pockets through the application of a vacuum
3. The method of Claim 1 whereby said standardized interchangeable ceramic mold inserts are secured to said standardized mold base pockets via an adapter plate or frame made from a metallic composition having substantially the same or slightly lower coefficient of thermal expansion as that of said ceramic mold inserts.
4. The method of Claim 1 whereby said interchangeable ceramic mold inserts are produced by ceramic injection molding.

5. The method of Claim 1 whereby said interchangeable ceramic mold inserts are made from aluminum oxide.
6. The method of Claim 1 allowing the molding of articles with improved dimensional accuracy and to tighter dimensional tolerances.
7. The method of Claim 1 allowing the reduction of dimensional or surface texture inconsistency between identical articles molded in different molds or in different mold cavities.
8. The method of Claim 1 whereby mismatch between matching articles molded in different molds or in different mold cavities is reduced.
9. The method of Claim 1 whereby the geometry of a molding cavity can be changed rapidly to that of a different design.
10. The method of Claim 1 whereby the economic life of a molding tool is extended through the use of standardized interchangeable ceramic mold inserts.
11. The method of Claim 1 whereby the investment and maintenance costs of tooling for injection molding are reduced.

12. The method of Claim 1 whereby the simultaneous mass-production of identical, matching or interchangeable molded articles can be rapidly implemented in different geographical locations.
13. The method of Claim 12 whereby the molded articles are watch components such as watch cases, bracelet links and buckles
14. The method of Claim 12 whereby the molded articles are components for cellular telephones.

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